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# Worldwide Report

**EPIDEMIOLOGY** 

No. 261



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12 January 1982

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POOR HEALTH SITUATION IN HUILA--Lubango--The irregularity of the water supply in the city of Lubango and the shortage of basic food items have seriously affected the solution of health problems in the area, Nilo Vaz Borges, provincial health delegate in Huila, has stated. He also said that "the shortage of water has created enormous problems, especially in relation to surgical interventions," since operating physicians are confronted with great difficulties when it comes to clothing that should be duly sterilized. He added that the problem of the irregular water supply exists in addition to the problem of garbage and other refuse accumulated in a number of areas of the city of Lubango, which is at the origin of various epidemics. Vaz Borges also deplored the fact that hospitals have not received food supplies; he appealed to the provincial government to give priority to health institutions for the distribution of basic necessities such as milk, eggs, meat and fish. [Excerpt] [Luanda JORNAL DE ANGOLA in Portuguese 9 Dec 81 p 4]

SUCCESSFUL POLIO CAMPAIGN—During a visit to some of the 9 municipalities of the province of Lunda-Norte, we were able to get in touch with health authorities in charge of the fourth polio vaccination campaign in that province. The campaign was conducted with strong support from the mass organizations and the party organizations, as well as from the para-medical cadre of health centers. With considerable effort, more than 50,000 persons in all the communities, villages and rural areas were vaccinated against this disease, in addition to some thousands of other vaccinations against measles, tuberculosis and tetanus. Despite the precarious means of transportations, the fourth polio vaccination campaign in Lunda-Norte was a marked success and included new-born babies to 5-year-old children, as well as pregnant women. [Excerpts] [Luanda JORNAL DE ANGOLA in Portuguese 20 Nov 81 p 4]

CABINDA VACCINATION CAMPAIGN--A total of 22,920 children were vaccinated in the province of Cabinda until the last quarter of this year; a total of 674 children received the BCG vaccine, 18,423 were vaccinated against polio and 3,823 against measles. The campaign extended to the municipalities of Cabinda, Cacongo, Buco-Zau and Belize. However, there are still a number of difficulties jeopardizing the implementation of the enlarged vaccination plan among at least 50 percent of the population most vulnerable to measles, polio, tetanus, etc. The lack of material means and personnel is contributing to the stagnation of the work aiready planned. [Excerpts] [Luanda JORNAL DE ANGOLA in Portuguese 20 Nov 81 p 4]

### ANTIBIOTIC-RESISTANT STAPH BLAMED FOR HOSPITAL DEATHS

Melbourne THE AGE in English 31 Oct 81 p 1

[Article by Mark Metherell]

[Text] An organism which defies most antibiotic treatments is thought to have been associated with the deaths of more than 100 Victorian hospital patients in the past 12 months.

The form of golden staph--multi-resistant staphylococcus aureus (MRSA)--has caused serious problems for most of Melbourne's big public hospitals for more than a year.

The incidence of the disease, largely peculiar to Melbourne hospitals, has been reduced, but is still not down to what officials regard as satisfactory levels. MRSA is a potentially lethal organism, which through widespread use of antibiotics has developed a resistance to all but a decreasing number of infection control drugs.

The director of the Health Commission's hospitals division, Dr Lavid Race, estimated yesterday that more than 100 deaths had been associated with MRSA. But Dr Race emphasised that this did not necessarily mean that MRSA had been the prime cause of death, as most infected patients would have been in a severely weakened state from other malignant infections.

The assistant microbiologist at the Royal Melbourne Hospital, Dr Ken Harvey said yesterday that the increasing difficulties in treating drug-resistant organisms threatened to make the 1980s a "decade of despair" in drug use.

MRSA is found mostly in big hospitals because of the widespread use of antiobiotics and "invasive" procedures. Such procedures as surgery and the insertion of catheters leave the body more vulerable to MRSA.

It can be spread through contact or through the air. Medical staff examining an infected wound in one patient can introduce it to another patient unless strict disinfecting steps are taken.

Dr Race said that the Health Commission was revamping MRSA control guidelines which were originally introduced a year ago. These included tighter procedures for "barrier nursing," and would involve such precautions as more regular changes of nurses' gloves and gowns.

### INFLUX OF FOREIGNERS INCREASES RATIO OF DOCTORS

Melbourne THE AGE in English 17 Oct 81 p 11

[Article by Mark Metherell]

[Text]

The influx of foreign medical graduates into Victoria had continued at double the levels recommended by a Federal committee three years ago, a medical manpower researcher, Dr Ian Rowe, said yesterday.

Dr Rowe said that of the 558 graduates registered by the Victorian Medical Board last year, 110 were foreign. In 1978 a committee of Federal officials had recommended that annual doctor imports should be restricted to 200 nationally, 54 in Victoria.

Dr Rowe's findings follow new evidence that the production of doctors in Australia is exceeding rates in comparable countries, placing increasing pressure on health care costs.

A survey by the former dean of Monash medical school, Emeritus Professor Rod Andrew, indicates that Australia's doctor-population ratio now equals or possibly exceeds that of the United States. Medical school

intakes there were trimmed by 16 per cent recently.

Professor Andrew said that on the basis of American research, each new Australian doctor who entered professor appropriate appropriat

entered practice generated \$150,000 in medical costs. Health economists say that an over-supply of doctors, far from reducing costs in a traditional supply-and-demand way, results in increased overall costs, in-creases the risk of unnecessary treatment and encourages lower standards of care.

Dr Rowe said: "The number of foreign medical graduates coming into Victoria, even though it has been reduced, is virtually what would be produced by a third medical school in the State."

Dr Rowe, a part-time research fellow for Monash medical school's department of com-munity practice, is completing a manpower study for the Medical Board of Victoria.

MEDICAL COUNCIL MAINTAINS STANDARDS THAT HIT FOREIGNERS

Sydney THE SYDNEY MORNING HERALD in English 3 Nov 81 p 13

[Article by Greg Turnbull: "High Waste of Foreign Doctors"]

[Text]

CANBERRA. — The Australian Medical Examining Council has rejected calls to relax its standards in spite of a failure rate of 77 per cent among foreign doctors seeking registration here.

In its 1981 annual report, the council has acknowledged requests from foreign doctors for examination conditions to be eased, but rejected them without explanation.

The council's examination, introduced in 1978, must be passed by any foreign doctor wishing to work in Australia, except those from Britain and New Zealand.

The examination has attracted considerable criticism from individual doctors, and from migrant groups which have complained that the high failure rate leaves ethnic communities short of doctors who understand their languages and culture.

The examination, with written and clinical sections, can be attempted only three times.

Candidates who fail any single section of the test must repeat all sections at any subsequent sitting.

The annual report shows that in the six examination sessions conducted since the introduction of the system, 292 people have attempted it here and 98 have attempted it overseas at Australian Embassies.

Of the 390 candidates, only 90 were awarded a council certificate

— a pass rate of 23 per cent.

Indian doctors have attempted the examination 143 times, the highest number of attempts from any country, for only 21 passes.

Among the other common countries of origin are Sri Lanka (54 attempts for 18 passes), Egypt (33 attempts for three passes), Philippines (24 attempts for nil passes), South Africa (18 attempts for nine passes), Iran (17 attempts for nil passes), Vietnam 15 attempts for ne passes) and Yugoslavia (14 attempts for nil passes).

passes).

The council charge a \$250 examination fee and a \$250 fee for the certificate.

In the 12 months to June this year foreign doctors paid \$47,000 in examination fees and nearly \$6,000 for certificates.

The deputy chairman of the council, professor Sir Lance Townsend, said in Melbourne yesterday a properly trained acctor should be able to pass the examination, and it would not be in the public interest to lower the standard.

The council had rejected requests to lift the limit on attempts at the examination because the existing three attempts already gave foreign doctors a concession not enjoyed by Autralian medical students.

Complaints about the requirement that all sections of the exam be repeated at the second and third attempts were also rejected.

Sir Lance said this was the normal rule in Australian universities, and the council also wanted to prevent foreign ductors trying to pass the examination "subject by subject."

DENCUE OUTBREAK--Cairns--About 100 suspected cases of dengue fever had been discovered on Thursday Island, the State Public Health Director, Dr Ron Ramm, said yesterday. "Only six of these were serious enough for the people to be admitted to hospital," he said. "We will not have any positive seriological confirmation of the disease until Friday, but the doctors are convinced that it is dengue fever," he said. Dr Ramm said the fever lasted for about a week and was often known as "break-bone" fever because of the pain it caused in bones, joints and muscles. He said he had heard of eight mild cases of the fever between March and July in the Cairns and Townsville area this year. [Text] [Brisbane THE COURIER-MAIL in English 4 Nov 81 p 19]

ENCEPHALITIS THREAT--Melbourne--The Victorian Government has asked for Federal funds to combat any possible summer outbreak of encephalitis in the Murray Valley. A spokesman for the Minister for Health, Mr Borthwick, said it was feared that recent heavy flooding in the valley could encourage the breeding of mosquitoes which carry the virus. The last major outbreak of encephalitis in the valley, which is on the NSW border, claimed 11 lives in 1974. Government funds have since been spent on pesticides. Australian arbo encephalitis--litis-causes extreme drowsiness and high temperatures in the early stages. [Text] [Sydney THE SYDNEY MORNING HERALD in English 31 Oct 81 p 5]

BURUNDI

### BRIEFS

CHOLERA KILLS EIGHT--Bujumbura, Honday--Eight people have died since the end of October in a choleral epidemic in two western provinces of Burundi, according to Health Ministry officials here. The epidemic is affecting the provinces of Bujumbura and Baganza, near the Burundi-Zaire frontier, and Health Ministry officials have reported 132 cases since the outbreak began. Health authorities have launched a huge publicity campaign in Burundi's media to promote hygiene among the population. In 1978, 315 people died of cholera in an epidemic scarting in the southern province of Bururi and affecting 11,502 people. [Text] [Blantyre DAILY TIMES in English 1 Dec 8: p 2]

### ERIEFS

REPORTED CHOLERA CASES--The newspaper BOZKURT reported yesterday that "the incidence of mice is increasing greatly in Famagusta," to the point that the rodents are constituting a threat to the inhabitants as a source of disease. The paper adds that about 30 children are hospitalized in the children's wing of the Famagusta hospital, suffering from intestional infections and liver trouble. The BOZKURT states that according to a hospital chemist a number of cholera cases have been diagnosed recently. [Text] [Nicosia TA NEA in Greek 4 Dec 81 p 1]

ANTI-BILHARZIA CAMPAIGN SHOWS PROGRESS -- An intensive plan to combat endemic diseases especially bilharzia being implemented by the health authorities has begun to bear fruits, helping to reduce infection percentage from 129,2 to less than 14 per cent in Upper Egypt and to 7 per cent in Fayyum, the Minister of Health, Dr Mamduh Gabr said yesterday Opening the International Conference on Bilharzia, Dr Gabr, added that 2900 health units to combat Bilharzia diseases were working throughout the country and there was a plan to prepare all the health units in the country to work in combatting endemic deseases in cooperation with the Theodor Bilharz Research Institute in Embaba, Cairo. He said the plan concentrates on three domains, treating patients, combatting the shells and promoting health public awareness among the people. A further plan to combat the disease start soon in the Delta and other areas. The Minister of Education and Scientific Research, Dr Mustafa Kamal Helmi, said that Bilharzia was an economic and social problem in the first place having serious effects on the patient. The Chairman of the Scientific Research and Technology Academy Dr Ibrahim Badran, called on intensifying research on combatting disease by introducing the latest methods of research and using the most up-to-date equipment. [Cairo THE EGYPTIAN GAZETTE in English 20 Dec 81 p 2]

SEWERAGE, DRAINAGE WORK--Contracts totalling over \$2.1 million for work on drainage, sewerage and water supply, were signed by the Parliamentary Secretary in the Ministry of Construction, Mr Ferdie Yap, the contractors and Members of Parliament at the Ministry, Half-Way-Tree, St Andrew on Tuesday. A \$1.24 million contract was signed by Marley and Plant and the Member of Parliament for Central Clarendon and Minister of State for Information, the Hon. Mike Henry, for completion of infrastructure, drainage, water supply and sewerage works at Bushy Park, May Pen, Clarendon. The project which will service some 400 lots was started in 1978, but stopped in 1979 after funds ran out. Mr Peter Marley signed on behalf of Marley and Plant. A \$571,270 contract for civil works to the sewerage treatment plant at Whitehall, Negril, Westmoreland was signed by Member of Parliament for Western Westmoreland, Mr Buxton Cooke. The representatives of the contractors, Rebeck Engineering, were however absent. A third contract for the spending of \$341,995 for civil works on the sewerage treatment plant in Anchovy, Portland, was also signed. Mr David Chin of the contractors, David Chin and Associates, signed. The Minister of Tourism and Member of Parliament for Eastern Portland, the Hon. Anthony Abrahams, was absent. Mr Yap said after the signing that it was the government's concept that houses should not be constructed without the proper infrastructures in place. He said that the government would insist that the infrastructures be put in place either prior to the building of houses or at the same time to guard against vandalism and closures. [Text] [Kingston THE DAILY GLEANER in English 27 Nov 81 p 29]

SAYABOURY ANTI-MALARIA WORK--During the second quarter of this year, doctors of the Malaria Service of the district and provincial hospital in Sayaboury were organized to lead the people in spraying DDT to suppress malaria germs. The work was completed in eight villages of Ban Gnai Canton and Na To Canton with a total of 354 households. Along with the spraying, the doctors took action to check blood in 13 villages. This numbered 1,980 people. Of those, malaria was found in 316 people. Anti-malaria tablets were given to 1,234 people. Along with popularizing methods of preventing the disease in the production bases for strict implementation, this played a part in reducing sickness on the part of the cadres and people in the area. [Text] [Vientiane SIANG PASASON in Lao 10 Aug 81 p 1]

TYPHOID IN AL-MATN AREA--The doctors Associated President Dr Fu'ad al-Shimali has stated that typhoid has spread extensively in the area of southern al-Matn. He said that the polluted water of al-Shafa is the principal cause for the disease spreading. Health Minister Dr Nazih al-Bizri has emphasized to the Voice of Lebanon Radio that numerous typhoid cases have been recorded in the area of 'Alayh. A number of persons suffering from typhoid have been admitted to the al-Zahra' hospital. In the north, Health Department Chief Dr Samir Tabbarah has stated that the al-Kurah waters are polluted and that this has caused the appearance of some symptoms of typhoid. The Health Department called on the citizens to sterilize water before using it and to wash vegetables well. [Text] [NC221320 Beirut Voice of Lebanon in Arabic 1215 GMT 22 Dec 81]

MALAWI

### BRIEFS

RABIES VACCINATIONS--Blantyre, Tuesday--A rabies tie-up order has been enforced in the city of Blantyre beginning from December 7 to December 23. The spokesman is requesting all dog owners to tie-up their animals for 24 hours each day during the dates mentioned. Free anti-rabies vaccination will be available to dogs and cats in all areas affected by the tie-order, the spokesman added. [Excerpts] [Blantyre DAILY TIMES in English 9 Dec 81 p 7]

ENCEPHALITIS ON DECREASE--Siddarthanagar, Nov. 30--Stray cases of Encephalitis are believed brought under effective control. According to doctors at Butwal Zonal Hospital no complaints have been received in the last fifteen or twenty days regarding the disease. Earlier, nearly twenty patients visited the hospital for treatment, of whom six had died. Meanwhile, it is learnt that the regional office of Nepal Malaria Eradication Project has intensified spraying of anti-mosquito insecticide, while the Siddarthanagar Town Panchayat has started spraying diesel and soap water into drains and water-logged parts of the town. [Text] [Kathmandu THE MOTHERLAND in English 1 Dec 81 p 2]

### BRONCHITIS CASES DECREASING, GASTROENTERITIS INCREASING

Managua BARRICADA in Spanish 18 Nov 81 p 12

[Text] While there has been a decline in the high incidence of respiratory illnesses prevalent among the children who visited the Fernando Velez Paiz Hospital between September and November, now gastroenteritis is on its way to becoming the number one cause of illness if parents do not turn to the hospital in time.

Dr Romeo Osegueda, interim director, Dr Jose Enrique Solis, coordinator of pediatric services, and Dr Rolando Padilla, a physician, all of the Velez Paiz Hospital, issued a plea for parents to go to their nearest health services center as soon as a child shows the first symptoms of diarrhea.

"Generally the mother waits until she has given the child medication recommended by a neighbor, and only goes to the hospital when the child's clinical picture has become serious," said Dr Jose Enrique Solis.

Sixty to Seventy Children with Respiratory Problems

Dr Solis stated that respiratory illnesses-bronchitis, broncho-pneumonia, and bronchial asthma--continued to account for a high incidence of visits to the hospital. "An average of 60 to 70 children were suffering from respiratory problems, so that in every ward there were two or three children in each cradle, and the halls were also full," commented Dr Solis.

Both Dr Solis and Dr Padilla, who work in different pediatric wards, said that while diarrhea may result from parasites, most of the children visiting or entering the hospital are suffering from diarrhea caused by infection.

People should exercise greater care in washing their hands, boiling diapers, and depositing feces in proper places, especially as the number of flies has increased recently. Also, they should go to the nearest health services center with sick children and request Cral Rehydration Units, remarked Dr Solls.

Dr Solis also stated that a previously unreported pathology resulting from a germ that causes diarrhea has recently emerged. "These cases take a severe and immediate form, in which the child sometimes suffers shock due to dehydration," the doctor reported.

Dr Romeo Osegueda says that an average of 900 children visit the hospital's outpatient and emergency services every day. He assured us that the clean-up campaigns organized by the CDS [Health Defense Committees] have been a great help in lowering the incidence of disease due to diarrhea.

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### VENEREAL DISEASES INCREASING IN COUNTRY

Managua EL NUEVO DIARIO in Spanish 7 Dec 81 p 9

[Article: "National Plan for the Control of Venereal Diseases"]

[Text] Official sources of the Ministry of Health reported that venereal diseases have increased alarmingly in Nicaragua in the past 2 years, and in some international symposiums it was reported that sexually transmitted diseases today constitute one of the most serious public health problems worldwide.

Dr Jaime Manzanares, national chief of epidemiology, indicated that the most preoccupying increases center chiefly on gonorrhea and syphilis.

Comparative increases are shown statistically as follows: in 1979, 1,969 cases of gonorrhea were recorded for the entire country; in 1980, 1,758 cases; and in the first quarter of 1981 alone, the cases rose to 582. It is therefore estimated that in 1981 total cases will exceed 3,000.

The same thing occurred with syphilis. In 1979, there were 475 cases; in 1980, there were 2,002 cases; and in the first quarter of this year alone, 825 cases were recorded. It is therefore estimated that in 1981 total cases will exceed 3,000.

According to our source, it must be noted, however, that these are only the cases that have been made known by public welfare centers and that, according to what usually occurs, the true number of cases is 10 or 20 times greater than what has been made known.

This is the case because people are ashamed of venereal diseases and consequently those who suffer from them prefer to care for themselves and administer self medical treatment, which in the long run is dangerous, or else they go to private dispensaries.

Self-medication is dangerous, because the treatment is not administered under the guidance of medical science and, in the majority of cases, the sick persons consider that they are cured after taking some medicine; but that is not so, and the disease instead becomes worse with time.

Dr Manzanares recently participated in an international course in Havana, C.ba, on sexually transmitted diseases. It was stated there that that type of disease at the present time is one of the most serious of public health problems in the world.

It was also established during that international event, in which reputed specialists in this field participated, that most countries around the world, including Latin America have lamentably neglected to control and watch over that category of diseases, and this has resulted in a notable increase in them.

According to the statements of the health official, the same has occurred in Nicaragua, as is reflected in reported statistics.

It must be pointed out that venereal diseases originate in various social, cultural, and economic components. It is important for both the government and the people to approach them at the scientific and technical level.

However, it is believed that the main transmitter agents of venereal diseases are promiscuity and frequency of sexual relations, which have increased phenomenally, especially among young people, as a result of sexual freedom.

In addition, high risk groups or those most disposed to venereal diseases are the residents of port areas and in general all young people.

Specifically, in Nicaragua the zones and places of greatest venereal diseases incidence are all the ports of the country, the Zelaya Sur region and of course its capital.

He cited as examples Bluefields, Corn Island, and the Bluff of Zelaya Sur, where at the present time there are a great many sterile women as a result of venereal disease.

And in the case of women gonorrhea is much more problematic, since 60 percent of the women who contract this disease do not realize that they have it because, contrary to the case of men, it does not engender secretion.

Thus, in a high percentage gonorrhea causes acute pelvic inflammation in women, to the point that they become sterile.

Apart from the above, it must be said that terciary syphilis, which is the result specifically of improver treatment, is irreversible.

Because of the above, said Dr Manzanares, in the second quarter of 1982 the Ministry of Health will start a National Plan for the Control of Venereal Diseases that will include incensive education in this field in secondary and university centers.

This national plan will be directed by a national committee that will be constituted next year for this purpose and will be staffed by pediatricians, gynecologist-obstetricians, dermatologists, epidemiologists, psychologists, and social workers.

Also, next January two international advisers will arrive to visit all of the risk areas of the country, in order to elaborate the national plan for the control of sexually transmitted diseases. The national plan will start with a pilot plan that will be developed in the problematic area of Zelaya Sur.

8255

ANTIMALARIA CAMPAIGN--The Ministry of Health reports that 85 percent of the population was included in the antimalaria campaign. In evaluating the antimalarial medical treatment campaign that was carried out this past weekend, Dr Milton Valdez reported that more than 85 percent of the population was reached. Valdez, who is the area's Director General for the Control and Eradication of Malaria, said in the evaluation meeting that was attended by the Minister of Health and representatives of mass organizations that malaria is now under control. He added that nevertheless there are no precise statistics on the status of the control of the above mentioned disease, out that "it is a fact that all the people here who had malaria received treatment and that all those who were sick took the medicine, as did a great percentage of those who were healthy." He explained that a somewhat more precise analysis revealed that there was greater coverage in the more malarial areas of the country and cited as examples Nandaime and San Francisco del Carnicero, with 94 and 96 percent coverage respectively. "At this time all those who had malaria are healthy. We assume that technically it is under control," he said. He announced that there will be further research, in order to judge the impact of the mobilization through a comparison of the status of malaria prior to medical treatment and after it. He stated that the disease must be kept at a low level, "and not only must it be kept a low level, because we are not going to settle for that. We are going to eradicate malaria within a short time," he said. [Text] [Managua LA PRENSA in Spanish 25 Nov 81 p 10] 8255

### BPIEFS

MEASLES OUTBREAK--An out-break of measles has been reported in Ezzagu in Ishielu Local Government Area, Anambra State. The clan head and traditional ruler of Ezzagu, Chief Linus Enyukpor told DAILY STAR at Ezzamgbo that 20 children had died following the out-break of measles in the town. Chief Enyukpor was at Ezzamgbo to report the situation to officials of the Anambra State Ministry of Health. He stressed the need for speedy action to arrest the situation. Chief Enyukpor pointed out that the Health Sister in charge of Ishielu assured him that drugs would be rushed to the affected area without delay. He lauded Government health scheme and the introduction of the mobile doctor service by the Chief Executive of Anambra State Government, Chief Jim Ifeanyichukwu Hwobodo. [Joe Onovo] [Text] [Enugu DAILY STAR in English 16 Oct 81 p 12]

CHOLERA CASES -- The Oyo State Chief Health Officer, Dr Dejo Raimi, said in Ibadan that the reported outbreak of cholera in the state capital was already under control. Addressing Newsmen, Dr Raimi said that the Ministry of Health anticipated the disease and had acquired more than one million doese of anti-cholera vaccines to combat it. He said that it had been the pattern between August and December in the last 10 years to have more patients admitted to hospitals for diarrhoea and vomitting with some confirmed as cholera cases. He stated that mobile vaccination teams had since last month been sent to all the affected areas of the city in addition to services being rendered at three Health Centmes. Dr Raimi also said that a disinfectant team had been washing and treating vehicles used to bring patients to hospitals while another had been going to disinfect patients' homes. He further said that temporary sheds had been erected at the cholera unit at Jericho to which, he added, patients were being referred from other hospitals. Dr Raimi explained that most of the patients brought to the hospitals and the cholera unit were suffering from diarrhoea and vomitting which, he said, could be symptoms of some other diseases. He then attributed the situation to shortage of treated water which was usually experienced during this period. [Text] [Enugu DAILY STAR in English 20 Oct 81 p 3]

### HEALTH WARNING ON MEASLES CASES

Manila BULLETIN TODAY in English 18 Dec 81 pp 1, 16

[Text] A health warning was issued yesterday by Dr. Cesar V. Dylangoo, director of the San Lazaro hospital (SLH), on the increasing incidence of measles and respiratory diseases in Metro Manila.

Uylangco advised the public to take extra care in protecting themselves from diseases with the "advent of the cold weather which is also the advent of measles and respiratory diseases."

He said people must keep themselves warm to prevent chilling which, he said, can cause a lowering of lesistance to infection.

The SLH director said measles is a seriour disease among malnourished children who have a tendency to develop borderline diseases such as broncho-pneumonia, pneumonia, and bacteria infections. Children who develop such complications must be hospitalized immediately, he added.

Uylangco cited statistics from the SLH daily record which showed that a daily average of 15 in-patients afflicted with measles were admitted in November. This month, he said, the average number of admissions has increased to 40.

Dr. Julio P. Valera, chief of the Ministry of Health disease intelligence center (DIC) confirmed that the number of cases of measles has been steadily increasing.

However, he said, the latest figure of 31 admissions last week was still lower than the five-year median of 56 cases of measles and the 1980 median of 61.

Both Uylangco and Valera said the number of measles cases is expected to increase till February.

Meanwhile, a rise in the number of pnoumonia cases was noted by the DIC, as 153 cases were admitted at the SLH last wask, representing a significant increase from the previous week's 139 cases.

Valera said that the present figure was higher than the five-year median of 121 pneumonia cases (Marcia C. Rodriguez)

Medical specialist II Luz Arabit-Ramos of the bureau of health services' STD control service, division of disease control, issued a clarification yesterday on a report on syphilis.

The national prevalence is now 0.6 per 100,000 population, she said, not 11.74 per cent. The latter figure, she explained constitutes those positive in VDRL examinations which are not necessarily indicative of actual infection.

Penicillin is still the drug of choice in the treatment of syphilis if given in adequate and therapeutic doses, she said.

In spite of the meager budget for the national STD (sexually transmitted disease control program, social hygiene workers in the 12 health regions of the country are do-doing their share in curtailing the upsurge not only of syphilis but all other STDs, she added.

### NEW LAW ALLOWS INSPECTIONS, QUARANTINES TO CHECK EPIDEMICS

Dubai KHALEEJ TIMES in English 14 Dec ul p 1

[Text]

THE President, His Highness Shaikh Zayed bin Sultan Al Nahyan, has promulgated a federal law on protection from contagious and other diseases.

The law, issued yesterday, specifies 37 diseases including plague, small-pox, cholera, typhus, typhoid, yellow fever, calculus, diphtheria, influenza, child paralysis, rabies, liver inflammation, brain inflammation, malaria, tuberculosis, trachoma, scabies, worms, venereal diseases, whooping cough and food poisoning.

The law gives the minister of health

The law gives the minister of health the authority to declare, after the approval of the cabinet, any place or area a contaminated area and quarantine it, to prohibit private or public gatherings, to specify the number of passengers on public vehicles and other means of transport and to take other necessary measures in case of outbreak of cholera, smallpox, plague, typhoid, flu, typhus or any other contagious disease.

The law also empowers the health

minister to shut down, in consultation with the relevent minister, any educational instutution, cinema or sports building or any other public place to check the spread of a contagious disease.

It authorises inspectors to enter any building, place, vehicle, ship, or aircraft if they reasonably apprehend that a person therein is affected by a contagious disease. Vaccination of bubies against paralysis, tuberculosis, diphtheria, whooping cough and measles have been made compulsory. The defaulting parents will be liable to imprisonment up to three months or a fine up to Dh 3,000 or both.

The 31-clause law assigns to the various bodies functions such as quarantine, destruction of contaminated food, and burial of the body of a person dying of a contagious diseases.

The law also decrees imprisonment not exceeding one month or a fine not exceeding Dh 2000 or both for withholding information on any contagious disease.

ZAIRE

### BRIEFS

SPASTIC PARALYSIS--Kinshasa, December 3--An epidemic of spastic paralysis related to poliomyelitis has broken out in some 15 villages in the Masi-Manimba district of the Bandundu region, Central Zaire, about 500 kms (300 miles) from here, the Zairean news agency AZAP reported. Two hundred people, mainly nursing mothers and young children, were believed to have been affected by the disease. [Text] [Paris AFRICA AFP in English No 2851, 4 Dec 81 p 19]

### BRUCELLOSIS OUTBREAK DETECTED IN THREE DEPARTMENTS

Managua LA PRENSA in Spanish 5 Dec 81 p 10

[Text] Drs Roger Tijerino and Aristides Lazo, microbiologists and bacteriologists, reported that several cases of brucellosis have been detected in Managua, Boaco, and Chontales.

They were worried because of the fact that this disease in cattle is transmittable to humans when cattle are slaughtered without proper sanitary precautions; and they do not discount that this has happened.

They said that they came across several cases in their laboratories and alerted the health authorities in order to prevent the development of serious cases.

Drs Lazo and Tijerino expressed their fears to journalists, to ask them to urge the public not to consume products from doubtful sources, such as meat from cattle that are cut up in clandestine slaughter houses.

### A Veterinarian Speaks

In a consultation regarding the matter with Dr Jose Maria Cerna Obregon, a veterinarian gave a full explanation of the matter. He, too, was worried, "since it is a question of a disease that is difficult to cure in humans and there is no treatment for animals."

"Brucellosis has been active in Nicaragua for very many years and causes miscarriage in cattle at 7 months, which diminishes production. The disease is transmitted through raw milk, through direct contact with the cow's fetal matter, and through contact with the cow's amniotic fluid," he emphasized.

"There are no symptoms to the disease in humans. It may be confused with arthritis or malaria and only a bacteriological examination can verify the existence of the disease.

Cattle may seem to be healthy, but may be afflicted with brucellosis. The brucellosis is detected only when there is involuntary miscarriage.

"Brucellosis in humans causes what is known as "undulant fever"--fever, chills, aching bones, etc.--which is confused with, or appears to be, malaria, malaria or arthritis," he repeated.

"Women who are afflicted with brucellosis may also have miscarriages," he added.

At present there is a brucella antigens test and the disease can be detected through a blood test. The disease is transmitted by "brucella abortus [causative agent of infectious abortions in cattle] bacteria in animals; later, the "brucella melitensis" [causative agent of brucellosis] afflicts humans and is more violent.

"The Ministry of Agriculture Development is carrying out a campaign in which cattle ranches are examined. Blood samples are taken and it is highly recommended that precautions be taken to avoid contagion," explained Dr Jose Maria Cerna Obregon.

Cows that are designated for slaughter and that become afflicted with brucellosis must have their udders, stomachs, and lymph glands removed—usually done after the cattle have had a miscarriage. The fetus is highly contagious and, if allowed to live, becomes a "healthy" carrier of brucellosis, he explained.

If the above mentioned precautions are taken, there will be no danger with respect to the consumption of meat from cattle affected by Brucellosis, concluded Dr Cerna Obregon.

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CATTLE VACCINATED--Over one million cattle were vaccinated against various animal diseases in Borno State this year by the state Ministry of Animal Health and Forest Resources. The ministry also vaccinated more than 150,000 birds against poultry killing disease during the same period. Speaking at an interview in his office, the state Commissioner for Animal Health and Forest Resources, Alhaji Tijjani Sale Geidam, disclosed that his ministry has 98 mobile animal control centres and 32 permanent centres spread all over the state. [Excerpt] [Kaduna NEW NIGERIAN in English 25 Nov 81 p 13]

### JAMAICAN MINISTER ADDRESSES AREA PLANT PROTECTION GROUP

Kingston THE DAILY GLEANER in English 25 Nov 81 p 2

[Text]

Mr. Brasco Lee, Parliamentary Secretary in the Ministry of Agriculture, said on Monday that the Government placed great importance on the general discipline of plant

protection.

"We recognise that it is a most important component of any plan for increased protection and productivity and that it has a great role to play in achieving our goal to maximise our foreign exchange earnings," he told the inaugural meet-ing of the Society for Plant Protection in the Caribbean at the New Kingston Hotel.

Mr. Lee welcomed the formation of the society, stating that such a society was long needed in the Speaking on the impor-Caribbean. It was a logical step, he said, to take its place alongside its aister society the Food Crops Society of the

Caribbean.

The Society for Plant Protection in the Caribbean was formed in Mexico in October last year by the heads of plant pretection

in the Caribbean under the auspices of the Inter-American Institute for Co-operation in Agriculture (ICCA).

**Objectives** 

The main objectives of the society are to strenghten inter-governmental and inter-institutional cooperation in plant pro-tection in the Caribbean and to discuss plant protection issues affecting Caribbean agriculture.

It will also act as a forum for the exchange of ideas and information among plant protection per-sonnel of the region, as well as promote and stimulate research and teaching in plant protection subjects and to ensure that these are integrated into the discipline of plant protection.

tance which the Government placed on plant protection Mr. Lee said that pest and diseases were responsible for great economic losses in Agriculture, Forestry and Commerce. In many countries of the region, pests and diseases caused an average loss of \$31/3 per cent

in the field and 20 per cent in storage.

Without plant protection measures, the losses could range from 60 to 100 per cent, Mr. Lee said.

The Government, he said, recognised the importance of research and development in plant protection but, equally important, was the trans-fer of technology emanating from such research to the farmer in order to improve his production and productivity.

Quarantine

The Government also recmised the importance of plant quarantine sys-tems and had plans to greamline and upgrade the system locally to make it more effective. There might also be need, he added, to harmonise plant quarantine laws in the region to facilitate the smooth flow of trade.

Lack of information and

of technology available in individual countries could act as an impediment to trade since the plant quarantine laws in some countries may not be based on sound biological facts

It is in our collective selfinterest to keep the sone, region or hemisphere free of dangerous pests and diseases," Mr. Lee said. In the field of research

and development, Mr. Lee said, the hemisphere was served by many international institutes with a concentration of highlyspecialised staff and improved technology.

However, it was up to the members of the region to ensure that such strategy and technology were channelled to the region. The region, he stated, did not lack ideas. What was lacking was the will to implement them, as well as the effective know-how.

### COFFEE RUST AFFECTING OVER HALF OF COFFEE CROP

La Paz EL DIARIO in Spanish 23 Nov 81 p 3

[Text] More than 50 percent of the country's coffee plantations are experiencing heavy production losses due to the devastating effect of coffee rust, a dangerous disease which affects the leaf of this aromatic plant and whose eradication, despite the advanced techniques of our age, is considered virtually impossible.

Despite vigorous efforts, first to prevent it from coming into the country and then to control its spread, by various organizations specialized in that area and working with international experts, the rate of increase in coffee rust up to now is alarming, especially in the Yungas plantings where about 80 percent of the country's coffee is produced.

Experts of the Ministry of Agriculture and Campesino Affairs explained that this precarious situation stems basically from the ease with which this disease spreads and which, if not checked, will put the entire national production in jeopardy.

This type of rust spreads through the fine dust which develops on leaves so attacked and which readily adheres to hands, clothing, shoes and farm tools thus spreading the disease from infected leaves to healthy ones and from one plantation to another; in this manner, extensive coffee plantations are infested within a short time.

Civing their assurance that the disease affects only coffee production (decreasing it considerably) and not the consumers who receive only healthy plants, the experts indicated that this can reduce productivity by as much as 40 to 100 percent.

### Campaign

A few years ago, acting on the assumption that complete eradication of the disease is virtually impossible and following the example of other countries, Bolivia initiated a vigorous program to prevent its spread; but the program did not yield the desired result inasmuch as the disease has continued to spread dangerously.

However, at about the middle of this year the country initiated what is called the National Coffee Rust Program; its principal activity, in view of technical and budgetary limitations, will begin in January 1982.

Engineer Benigno Bascope, national director of plant health, advised that to improve planting conditions and increase domestic coffee production, the Technical Committee of the "Coffee Rust" Program, made up of that department, the IBTA, the COBOLCA and the AMPROCA [expansion unknown], is planning a number of measures within the scope of that program, the same to be intensified in the present administration until the primary goal is reached: to control the spread of coffee rust.

The plan includes publicity and qualification, the renewal and recovery of old coffee plantations, the production of plants capable of tolerating coffee rust and of high yield and regional examinations.

It also includes activities relating to chemical control and the transfer of spraying technology whose purposes and objectives were communicated to Bolivian technicians at a 5-day seminar held at the Yungas town of Corioco and attended by experts of the Andean Group.

With regard to publicity and qualification, one of the coffee rust program's fundamental objectives is to make coffee growers aware of the characteristics and control of the disease and give them the necessary technology to help achieve that control.

The program calls for the qualifying of 8,000 producers who will attend 792 short courses and witness 1,500 method demonstrations.

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GUATEMALA

### MEDITERRANEAN FRUIT FLY ELIMINATED IN LAS VERAPACES

Guatemala PRENSA LIBRE in Spanish 25 Nov 81 pp 14, 40

[Article by PRENSA LIBRE Correspondent Eduardo Sam Aldana]

[Text] Coban (Via La Cobanerita) -- More than 1,300 million sterile flies were released in Verapaces to Combat the Mediterranean fly, said agricultural engineer Carlos Alberto Molina, of the MOSCAMED [Mediterranean Fly] program.

He added that so far it has been completely eradicated in these departments, and that in 1979 the following municipalities had been affected: Carcha, Tamahu, Santa Cruz Verapaz, San Cristobal Verapaz, and Coban.

"At present," said engineer Molina, "the Mediterranean fly does not present any danger to Alta and Baja Verapaz. A preventive stage is currently being implemented, since this is the phase that must be vigorously carried out to prevent the fruit of the area from being infected again.

The release of sterile flies is being carried out by air and land. In addition, several traps have been placed in strategic spots throughout 11,800 square kilometers, including the sector of the Norte region.

"At present these flies come from Mexican laboratories, but it is very likely that next year the MOSCAMED program will be producing its own sterile flies," he said.

Continuing analyses are being made for the purpose of localizing any possible sources of the Mediterranean fly. In connection with this program, MOSCAMED gives free technical advice to all the farmers of the region, because in Veragaces they all have fruit trees in their plots of ground.

San Jeronimo, Baja Verapaz

A quarantine station was installed by the MOSCAMED program on the summit of Santa Elena, Baja Verapaz. It was inaugurated by the mayor of San Jeronimo, Carlos Enrique Solis Marroquin.

The public official remarked on the importance of the inaugurated project because, he said, in this way it will be possible to check damaged fruit that is sent to the northern part of the country, and to thus avoid the propagation of the above mentioned insect.

Engineer Carlos Alberto Molina, chief of operations in the Norte region, said that, on the summit of Santa Elena, a check will be made of all citrus fruit, mango, guava, and star apple fruit trees.

The MOSCAMED chief also said at this time that the quarantine station also operates in conjunction with the coffee rust committee for the purpose of combining efforts to protect the northern part of the country.

8255

ANIMAL DISEASE OUTBREAKS—On 17 August, the Veterinary Medical Service of Sanasom-boun District, Champassak Province sent its veterinary cadres to work in the production base areas in the cantons of Souvannakhili, Khamlouang and Pakson. This was done to popularize instructions on disease prevention of various diseases that were spreading in their areas of responsibility. Primarily, these were hoof and mouth disease, pasteurellosis, anthrax and others. This was done to encourage the cadres concerned to urgently suppress these diseases and was aimed at insuring draft power for use in agricultural production and to supply meat to raise the living standards of the cadres and the people. [Text] [Vientiane KHAOSAN PATHET LAO in Lao 26 Aug 81 p A 4]

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### FUNGUS DISEASE AFFECTING OMETEPE TOBACCO

Managua LA PRENSA in Spanish 22 Nov 81 pp 1, 12

[Article by Rafael Bonilla]

[lext] All land planted in Virginia tobacco, the raw material consumed by Nicaraguans, has been placed under quarantine for a period of 3 years, and perhaps indefinitely as far as the late crop is concerned, due to the effects of a disease known as "Pata Negra" [Black Foot]. This is a fungus disease which feeds on the roots of tobacco seedlings to the point of destroying them completely.

Seventy-four professional tobacco growers, who have joined together as the Tobacco-Growers Association of Ometepe Island, have faced up to the fact that they must cease planting some 340 fields of the late crop which falls between July and February. The latter month is the period when the leaves are harvested.

If the late crop is no longer planted in Zones 1, 2 and 3, said the association's secretary, Luis Octavio Gómez, the local farming community will lose 640,000 córdobas in income monthly. Tobacco growers face losses from investments in machinery, ovens and other equipment which will no longer be useful, at least for the late growing season.

The Tobacco Growers' Association has reached an agreement with TANIC to produce only in the early period, when all available fields will be planted, after first clearing the fields by plowing and turning, and to let the land rest during the late period in an attempt to starve the Black Foot fungus by denying it the nourishment it requires from plant roots.

Tobacco harvesters and TANIC have agreed for the near future to plant only once but at double normal production levels, in other words to plant twice as many fields as those now being worked, while attempting to discard the late planting altogether, since 40 percent of the last late crop was infected, leading to losses by growers.

A Clandestine Crop Discovered

Blue rust is considered more nefarious than Black Foot on Ometepe Island, which is the capital of the tobacco industry. That is why tobacco growers from other

areas, whose fields were attacked by the former disease, came to this island and took advantage of the existing quarantine by starting plantings of "chilcagre" tobacco at their own risk and expense, without any economic assistance. They were discovered by plant sanitation authorities, however, and their operations were shut down. These outside growers nevertheless received some economic compensation from the Tobacco Company in view of their interest in producing raw material for cigarettes.

### Economic Aid Then and Now

Originally, two years ago, the Tobacco Company of Nicaragua extended economic aid directly to growers in accordance with the number of fields they planted. Growers received tractors, sums for expenditures, and the necessaries of production, all at no interest. Now, in conformity with the latest provisions, economic aid flows through the National Development Bank and is endorsed to TANIC, [which acts as] something like a guarantor at interest on behalf of the banking system of an estimated 2,500 cordobas per field, which used not to be paid, to the prejudice of the growers.

In view of the costs involved, the tobacco producers made a study of their needs for economic aid, and requested 40,000 cordobas per field instead of 34,000. The Tobacco Company agreed, and the former figure will be in effect for the next crop.

### Tobacco and the Port Authority

As at other ports, every load that leaves the island under the new system will pay what amounts to an "export" tax. In the case of tobacco, every bundle pays an exit fee at the following rates: 30 cordobas for a bundle of 100 pounds, 45 cordobas for 100 to 150 pounds, and 60 cordobas for everything over 150. In addition each bundle pays three cordobas to the municipality and to the social welfare department.

Total transportation from Moyogalpa to Managua, which used to cost 48 cordobas, now comes out to 150 cordobas per bundle.

### Watermelon and Grains Planted

The Island of Moyogalpa, which produces every single cigarette consumed by Nicaraguans, is now turning into a watermelon and banana capital since its tobacco production has declined. For the duration of the quarantine period, tobacco producers will be growing watermelon and some of the grains that do best on the island, but they will employ few laborers, since they will use the mechanized equipment normally employed in the tobacco harvest.

Already launches can be seen departing so full of these products that their sterns are all but submerged in the waters of the Cocibolca, and many whole-sale buyers are coming to the island to buy their share of such products for distribution on the mainland.

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MEALY-BUG CONTROL--The training of Agricultural Extension Staff who will in turn train farmers on foliar spot-spraying of cassava crop against mealy-bug infestation, took place last Thursday October 29, at the Agricultural Information Conference Room near Market Garden, Enugu. In a memorandum from Mr F. C. Ogbogu, the Project Officer in-charge of Cassava Mealy-bug Control Campaign of the Food for the People Programme of the Anambra State, it was stated that the training will prepare Agricultural Extension Staff for the dry season foliar spot-spraying of particularly late cassava crop, as an integrated control farm practice against mealy-bug re-infestation. [Excerpt] 'Enugu DAILY STAR in English 4 Nov 81 p 3]

CROP PESTS--Insufficient rainfall and outbreak of pests have greatly affected plant growth throughout [Kano] state. According to the state's Chief Agricultural Officer, Alhaji Wada Ibrahim Dederi, crop harvest would fall below half of what was obtained last year. Alhaji Wada said that added to this was the outbreak of army worms--an unusual insect--which did a considerable damage to plants in Hadejia, Gumel, Garki, Maigatari, Ringim and Karin Hausa local government He, however said that prompt action was being taken to bring the pests under control. [Excerpts] [Kaduna NEW NIGERIAN in English 2 Dec 81 pp 1, 21]

### WIDESPREAD BROWN LEAFHOPPER PESTS IN NORTHERN PROVINCES REPORTED

Hanoi TAP CHI HOAT DONG KHOA No 7, July 81 pp 17, 18, 10

[Article by Bui Van Ich: "Preventing and Controlling Brown Leafhoppers in Northern Provinces"]

[Text] Brown leafhoppers have often appeared in northern provinces, damaging both the spring-5th month crop and the 10th-month crop. Until recently, however, they have clearly damaged rice yield on only about 1,000 to 5,000 hectares per season. But during the 1979 10th-month crop, following the July-August flooding, brown leafhoppers caused damage to more than 30,000 hectares, of which only an insignificant area suffered 100 percent loss.

During the 1980 10th-month crop, brown leafhoppers appeared over 25,000 hectares, with areas suffering 100 percent loss totalling more than 100 hectares. During the 1980-1981 spring-5th month crop, owing to warm and damp weather and early thundershowers alternating with hot sunny days, and also owing to allocations of varieties less resistant to pests (314, NN75-2, NN8, etc.), brown leafhoppers damaged nearly 40,000 hectares, including some 2,000 hectares suffering 100 percent loss. There were cooperatives suffering 100 percent loss on 20 hectares or so, with insect density reaching 5-60,000 heads per square meter. Although the extent of damage was still smaller than that in southern provinces in the years of 1977-1978, brown leafhoppers have emerged as the leading rice pest at the present time, and are capable of spreading over a larger area and causing serious damage in the days to come.

In the face of this situation, active, specific and realistic measures must be taken to promptly thwart and stamp out the damaging effects of brown leafhopper pests.

### I. Prevention and control measures

In light of recent experiences in successfully preventing and controlling brown leafhopper pests in southern provinces, and of the present production situation in northern provinces, the following combined anti-brown leafhopper prevention and control measures must be taken:

1. Sowing and transplanting pest resistant varieties is a measure of strategic significance. We must promptly determine and bring into production rice varieties having high pest resistance and other agricultural and biological characteristics suitable to the requirements of allocated varieties for each season and each zone. This is an anti-pest measure which is highly efficient, inexpensive and easily

accepted by the masses. Recently, the Cultivation Subcommittee of the Council on Sciences and Training in the Ministry of Agriculture decided to plant 6 pest resistant varieties on a large scale--NN3A, 1561, CR 101, CR 104, NN4B, IR46, and test out 2 other varieties--V12, CR 203. These varieties come from many different anti-pest origins, give high yield and fit in with the degree of intensive farming in the northern provinces at the present time. The NN3A, 1561, CR 101 and CR 104 varieties, sowed and transplanted during the recent spring-5th month crop on tens to thousands of hectares in Ha Son Binh, Thanh Hoa, Hai Hung, Haiphong, etc., were not damaged by brown leafhoppers and have produced a high yield.

- 2. Sowing and transplanting on schedule and carrying out sanitation measures on ricefields are effective only if done simultaneously, properly and thoroughly, on each field and zone. Attention should go to the following matters:
- --Strive to reduce the late spring rice area; don't transplant 10th-month rice too early; at all costs, transplant 10th-month rice only 10 to 20 days after completing the gathering of spring-5th month rice, so as to avoid easy pests transfer from spring-5th month rice to 10th-month rice.
- --Immediately after harvesting the spring-5th month rice, plough and harrow to promptly break up the stubble. Remove all weeds from field banks and water-filled fields before sowing and transplanting. Take special care to eradicate brown leaf-hoppers in fields having high insect density before harvesting those ravaged fields so as to prevent brown leafhoppers from infecting other ricefields.
- 3. Sow seedlings in a concentrated fashion and sow in furrows; regularly inspect seedling fields (3 times a day), promptly prevent and control brown leafhoppers and other harmful insects on seedlings.
- 4. Regularly inspect fields following transplantation, focusing on fields still using varieties not immune to pests, on fields and field beds frequently damaged by brown leafhoppers, and early transplanted fields, luxuriant fields, thickly transplanted fields, etc., especially when riceplants stand erect preparing to boot; and pests must be promptly eliminated right at the beginning, before the rice begins to boot and when insect count is 5 to 6 short-winged animals per clump.
- 5. Organize prompt and thorough extermination of pests with all methods, such as:
- --Using kerosene lamps to entrap adult long-winged insects in line with notices and guidelines of plant protection stations.
- -- Exterminate leafhoppers with vegetal insecticides (such as Derris roots).
- --Exterminate leafhoppers with oil: pour kerosene, diesel oil, fuel oil, etc., on the field when it is filled with water (leafhoppers scraped off into the oil covered water will die.
- --When exterminating leafhoppers with chemicals, we should:
- a. Use 666 and Wofatox only against tender and pre-adult insects,
- b. Use special insecticides such as Bassa or Mipcin against adult insects. We should mix 50 percent of Wofatox with 50 percent of Bassa (or Mipcin) in order to

save on these two special insecticides. Proper implementation of the above basic measures will also prevent and control many other rice damaging pests, such as army weevils, leaf folders, stem borers, rice gall flies, etc.

Measures to eradicate pests during the 1981 10th-month crop

The 1981 10th-month season has begun with a relatively fast sowing pace. The still large number of leafhoppers on the spring-5th month rice can easily infect new seedlings. Moreover, since the weather continues to be warm and damp, with abundant rainfall alternating withhot temperatures, and since transplanting density may be higher than that of previous seasons, brown leafhoppers may cause more damage to the 10th-month crop than they did to the recent spring-5th month crop. There are not many pest resistant rice varieties in this season. Most varieties still are vulnerable to pests (NN22, NN75-10, Moc tuyen, etc.), therefore, more insecticides and spraying tanks still are needed.

And, as a result, we must pay utmost attention to preventive measures:

- -- Regularly inspect fields, and promptly exterminate pests by controlling insect growth right at the beginning of the season.
- --Continue to research and speedily multiply pest resistant varieties so as to have them in sufficient quantities for the 1981-1982 spring-5th month rice season, as well as categories of rice varieties suitable to each locality for the 1982 10th-month season.
- II. Organization and implementation

On 11 June 1981, the Ministry of Agriculture issued Directive 10/NN-CT, launching a campaign to exterminate brown leafhoppers. To properly carry out this directive, we must:

- 1. Set up committees for prevention and control of brown leafhoppers at all levels, under the leadership of key corresponding commanding officials. The campaign to prevent and control brown leafhoppers must have the participation of many organs inside and outside the agricultural sector, and strict leadership, so as to properly organize the division of responsibilities and cooperation of related organs from industry, provision supply, communications and transportation, post and telecommunications, propaganda and media, etc. Experiences from recent campaigns against brown leafhoppers in the southern provinces show the need for properly doing this work.
- 2. Reinforce the plant protection system at all levels. This system, now in operation in the northern provinces, exerts a good impact on production, but there still are many weak aspects which need reinforcement. Continue to build district plant protection stations, and raise professional and technical standards, improve the work style, and strengthen the necessary material and technical bases of these stations.

Create conditions for these stations to gain material and spiritual strength and contribute to defeating brown leafhoppers, and successfully achieving plans for agricultural production development. Build and reinforce plant protection units in cooperatives in line with Directive 100 of the Secretariat of the Party Central Com-

mittee and Circular 05 of the Ministry of Agriculture, and with experiences of many cooperatives in currently carrying out product contracting management; and direct cooperative members in how to detect, prevent and control brown leafhoppers.

3. Properly carry out a rational distribution of pest resistant varieties, insecticides and spraying tanks from the central echelon to provinces and districts.
Since there still are not many insecticides and spraying tanks, we should operate
in such a way as to properly and rationally distribute supplies, concentrating them
on pests infested areas—a fact of special significance in specific antipests campaigns, etc.

With experiences in successfully preventing and controlling brown leafhoppers in 1977-1978 in the southern provinces, with the current product contracting movement in northern cooperatives, with a relatively strong and ever strengthening plant protection organization, and with fairly large and diversified quantities of pest resistant varieties, the prevention and control of brown leafhoppers during the 1981 10th-month season and in the near future, despite scarce supplies (insecticides and spraying tanks), will certainly achieve great success, enabling us to promptly thwart and stamp out brown leafhoppers' noxious effects.

In order to prevent and control brown leafhoppers with good results, scientific and technical matters concerning brown leafhoppers, especially those pertaining to prevention and control, should be continually studied—even in the southern provinces, where the brown leafhopper problem now is basically under control.

Especially in the northern provinces, these studies should focus on solving a number of questions, as follows:

- --Brown leafhoppers' biological and ecological characteristics relating to prevention and control (such as determining the biotype of brown leafhoppers, and the rules governing brown leafhoppers' procreation, accumulation and destructive activities, etc.).
- --Estimating and forecasting methods (such as procreation periods, insect counts, extent of damage, forecasting pests, etc.)
- -- Prevention and control measures, with focus on the following:
- 1. Determine and promptly bring into production a set of brown leafhopper resistant rice varieties, suitable to each season, each zone, each field, and capable of meeting the current requirements of intensive farming and multicropping. Prepare rice varieties capable of resisting and tolerating new types of harmful insects which may appear, especially rice varieties having a gene capable of resisting vertically-striped and horizontally-striped insects.
- 2. Determine insect density thresholds at which prevention and control measures should be taken, throughout different stages of insect growth as well as different stages of rice growth,  $\epsilon$
- 3. Determine the efficiency and methods of using pesticides (chemical, vegetal, etc.): and appropriate tools for administering insecticides.
- 4. Economic and technical effectiveness of other anti-pest measures.

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# END OF FICHE DATE FILMED

Jan. 15, 1982